Canada. Dept of Defence Production.
Report.

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REPORT

of the

DEPARTMENT OF DEFENCE PRODUCTION

January 1 to December 31, 1959

OTTAWA

105-04279/

NINTH REPORT

of the

DEPARTMENT

of

DEFENCE

PRODUCTION

1959

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Honourable RAYMOND O'HURLEY, *Minister*

D. A. GOLDEN, *Deputy Minister*

81182-8—1

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To His Excellency Major General Georges P. Vanier, DSO, MC, CD,
Governor-General and Commander-in-Chief of Canada.

MARCH 3, 1960.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit to Your Excellency the Report of the Department of Defence Production for the calendar year 1959.

A summary of the operations and services rendered by this Department, under their respective headings, is laid before Your Excellency.

Respectfully submitted,

Raymond O'Hurley.

Minister of Defence Production.

81182-8—2

MARCH 2, 1960.

The Honourable Raymond O'Hurley, P.C., M.P.,
Minister of Defence Production,
Ottawa, Ontario.

DEAR SIR:

I have the honour to submit the Report of the Department of Defence Production, which covers the operations and services rendered during the calendar year 1959.

Yours faithfully,

Deputy Minister.

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Introduction

UNDER the provisions of The Defence Production Act (R.S.C. 1952, Chapter 62, as amended), the Department of Defence Production has exclusive authority to procure the goods and services required by the Department of National Defence and the responsibility to ensure that the necessary production capacity and materials are available to support the defence production programme.

The Department also buys material for the Civil Defence programme and serves as procurement agent for the Canadian Commercial Corporation, a Crown company primarily responsible for the purchase in Canada of defence goods required by other governments and of supplies needed to meet Canadian commitments under the Colombo Plan and other international agreements.

Military construction is the prime responsibility of Defence Construction (1951) Limited, a Crown company reporting to Parliament through the Minister of Defence Production.

A change occurred in 1959 in the legislation governing the operations of the Department. Under the terms of the amending Act of 1955 (S.C. 1955, Chapter 52) the powers conferred by Sections 23 to 31 inclusive of The Defence Production Act expired on July 31, 1959. These sections empowered the Minister to compel acceptance and performance of a defence contract, to requisition supplies, to fix priorities, to appoint a controller to carry on the business of a contractor, to order inquiries and appoint investigators with the powers of a commissioner, and to control the production, distribution and use of essential materials and services. None of these powers had, in fact, been invoked in recent years.

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Production and Procurement

PROCUREMENT and construction activity for the Canadian defence programme, as measured in terms of payments to contractors, declined in 1959 for the sixth straight year. At $673.4 million, expenditures were 11 per cent lower than in 1958. Commitments to business and industry, as reflected by the net value of contracts issued, also were lower in 1959. The value of new contracts and increasing amendments to existing contracts, less decreases and cancellations, amounted to $591.6 million, 19 per cent less than in the preceding year.

Canadian defence expenditures made to prime contractors located outside the country represented 6.7 per cent of total cash payments during the year. This was a slight decline from the 7.7 per cent paid abroad in 1958. The largest portion of this foreign spending was in the United States. On the other hand, United States Government spending on prime contracts placed in Canada, which totalled $73.3 million in 1959, was much higher than Canadian prime defence spending in the United States. Following past Reports of the Department, these figures reflect only expenditures to prime contractors of this Department and Defence Construction (1951) Limited, and do not represent the total flow of Canadian defence expenditures into the United States nor of United States defence expenditures into Canada.

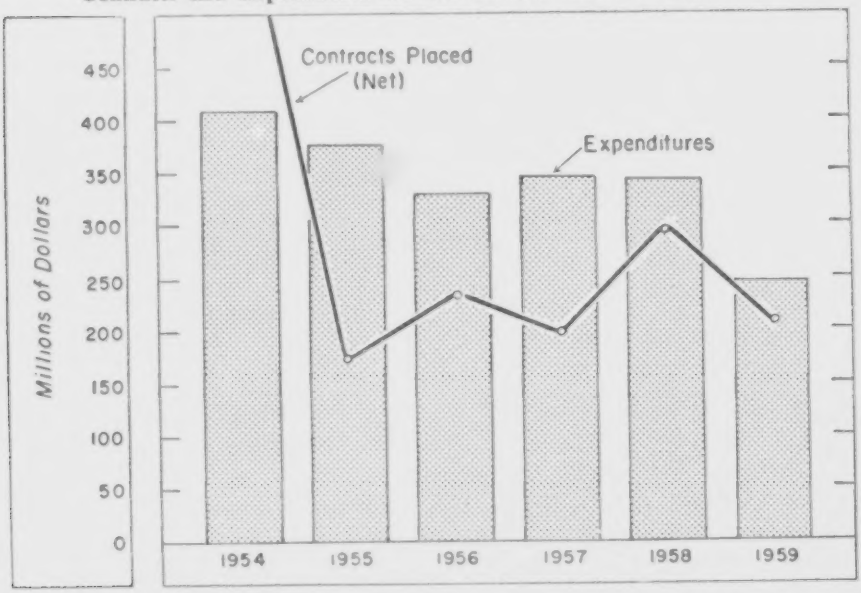
Details of the production and procurement programmes, an analysis of the contracts issued and expenditures made, and a report on the production sharing programme are given in the following pages. An account of the defence construction programme is contained in the Annual Report of Defence Construction (1951) Limited.

Aircraft

The termination of production of the CF-105 Arrow aircraft and its Iroquois jet engine on February 20th was the first major change in the Aircraft programme during 1959. Considerable progress was made in connection with the termination of the contracts involved in these projects, including the disposal of surplus material and the audit and payment of claims. Another major change resulted from the Government's decision to replace the F-86 Sabre aircraft presently in use by the Air Division in Europe with the CF-104 strike interceptor version of the United States F-104 Starfighter. By the end of 1959, contracts had been placed with Canadian firms for preliminary activities in connection with production of the airframe and the J-79-7 turbo jet engine. For the first time a company won a major military aircraft contract as a result of competitive bidding. Production of the J-79 engine will be carried out in the facility that developed and produced a large quantity of Orenda jet engines and developed the PS-13 Iroquois.

Licence and reconfiguration contracts were placed with the United States manufacturer of the Starfighter, and discussions took place with officials of the Government of the Federal Republic of Germany on sharing the reconfiguration costs.

Contracts and Expenditures for the Defence Aircraft Programme



Delivery of the CP-107 Argus maritime reconnaissance aircraft and of the carrier-based anti-submarine CS2F Tracker continued on schedule throughout the year. The CC-106, which is a long-range heavy transport version of the Argus, made a successful maiden flight early in November. Orders for a civilian version of this transport, with a hinged tail which swings aside to permit straight-in loading, were received by the manufacturer from two United States airlines. Production on the CC-109 medium range transport got well under way. The T-33 jet trainer programme was completed in the first half of the year.

Three new programmes for the Royal Canadian Air Force were undertaken in 1959. These included Otter general purpose aircraft, many of which have been produced for the United States Government, Albatross search and rescue aircraft, and H44A helicopters for medium transport and search and rescue operations. The Albatross aircraft were ordered from the United States as the quantity required was too few for economical production in Canada, but their R-1820-82 piston engines are being manufactured in this country.

The production of Beaver and Otter general purpose aircraft for the United States was virtually completed during the year. Some DHC-4 Caribou troop

transport and cargo aircraft were delivered to the United States Army for evaluation purposes, and one was being produced for the Canadian Army.

Production of Hamilton Standard propellers for the CS2F Tracker continued during the year, and an additional quantity of these propellers was ordered for the Albatross aircraft.

In the field of flight and navigation instruments, the position and homing indicator was selected by the Royal Canadian Air Force for use in the CF-104 aircraft. This Canadian designed instrument was also chosen by the German Air Force for its similar version of the Starfighter. Production continued on the navigation and tactical control (ANTAC) system. A very accurate low drift gyro was put into production, as was an integrator developed for use in complex systems. Delivery was maintained throughout the year on the R-Theta navigation computer.

The volume of activity on the repair and overhaul of aircraft, engines, instruments, electrical equipment and other related items was at about the same level in 1959 as in the preceding year. Considerable progress was made toward securing data that will permit placing repair and overhaul contracts on the basis of firm prices, fixed hourly rates or incentive targets.

Several of the engineering study contracts that had been awarded to provide useful work for a nucleus of the engineers previously employed on the Sparrow missile project were still active at the end of the year. The results of these studies so far have been encouraging.

The Aircraft Branch continued to participate strongly in the production sharing programme. The major project handled by the Branch was in connection with Canadian participation in the production of the Bomarc ground-to-air missile. Some $14 million in United States subcontracts relating to this programme were placed in Canada.

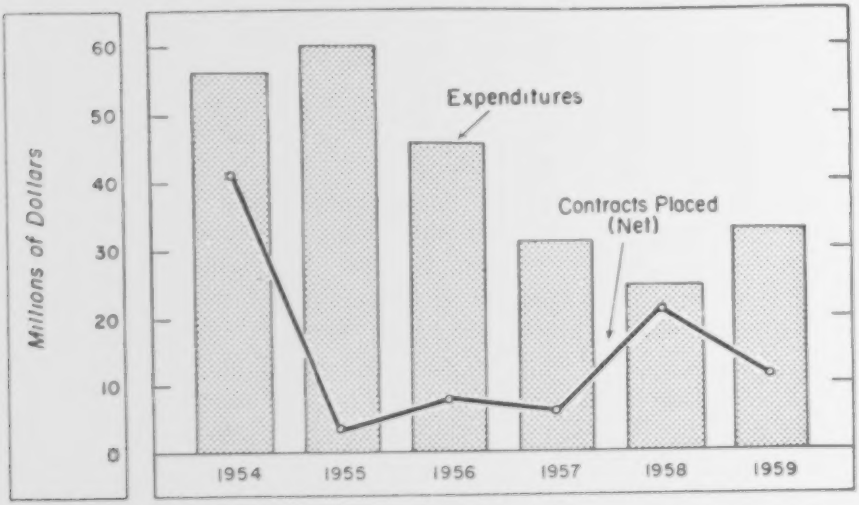
Ammunition

The production of ammunition in large quantities is gradually giving way to production in reduced amounts of more complicated items. Thus, emphasis was placed during the year on planning to supply a variety of more complex types of ammunition and components instead of larger quantities of conventional items.

Delivery of substantial quantities of ammunition was made to the three Armed Services. Production was completed on orders for 2.75″ rocket heads, 40mm rounds, a variety of small arms ammunition, 81mm, 60mm and 2″ mortar bombs, and 3″/50 calibre and 4″ cartridges. Production was also completed on an initial requirement for 17″ rocket components and 105mm improved performance projectiles for the Defence Research Board.

Production continued throughout the year on anti-submarine fuzes, practice depth charges, 7.62mm small arms ammunition of all types, several kinds of 105mm, 20 pdr. and Naval rounds, 2.75″ rockets, and pyrotechnics. Various rockets and 20 pdr. shot were modified to meet Army training needs.

Contracts and Expenditures for the Defence Ammunition and Explosives Programme



Production of a Canadian designed anti-personnel mine, 20 pdr. target practice rounds, training aids and pyrotechnics was begun during the year.

Development was undertaken or planned for anti-tank shot, improved fuzes, anti-submarine devices, and screening smoke rounds.

Production sharing opportunities were investigated with United States agencies on conventional ammunition, as well as on a number of types of rockets and small guided missile systems. A working group was established to explore 105mm gun and ammunition production sharing possibilities, and a survey of the chemical industry was made to determine the possible participation of this industry in Canada-United States joint research and development.

A number of special facilities previously used for the production of ammunition components continued to be maintained for future use. Since North American stocks of nitroguanidine are now adequate, negotiations were conducted and agreement reached under which the United States and Canada would share the cost of maintaining the Canadian production facility for possible future operation.

Approximately $1 million worth of special tooling for the production of ammunition components was catalogued and preserved for future use.

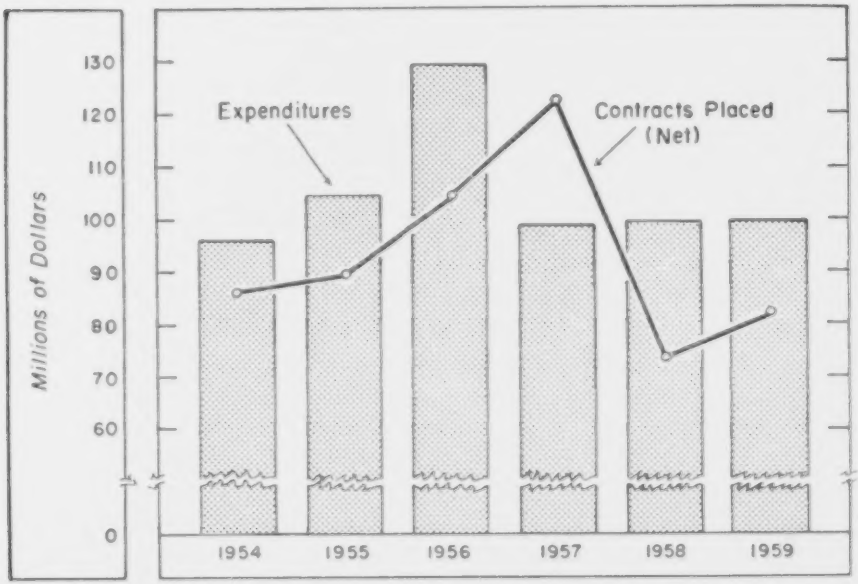
Electronics

Electronics and communication equipment requirements of the Department of National Defence approximated $100 million in 1959, which was about the same level as in the two preceding years. About 40 per cent of this was for operation and maintenance and 60 per cent was for development, procurement and production of surface and airborne equipment.

A major item was the continued production of heavy search and height finding radars for improvement of Pinetree radar stations of both the Royal Canadian Air Force and the United States Air Force. An associated item was the air defence communication requirements for the Eastern Ontario and Southern Quebec portion of the Pinetree line. Another important programme was the production and installation of fibreglass self-supporting radomes to replace the original air-inflated radomes and air pressurizing equipment. Production of selective aircraft identification equipment was also initiated for part of the Pinetree line. Ground control approach radars were procured for use at RCAF airfields in Canada.

Production took place in Canada for consoles for the display of aircraft data at semi-automatic ground environment (SAGE) direction centres in the United States, and for devices to provide an alarm signal for targets approaching the Distant Early Warning (DEW) radar line. Two new types of operators

Contracts and Expenditures for the Defence Electronics and Communication Equipment Programme



consoles for SAGE were also in the process of development for the United States Air Force. Contracts were placed for the leasing of communication facilities for both the RCAF and USAF in connection with the Pinetree and SAGE defence systems. In addition, other contracts were administered for the extension of Ballistic Missile Early Warning System (BMEWS) communications in Eastern Canada.

Radar and identification equipment for shipborne use continued to require significant activity in 1959. Search and attack sonars were a continuing production item, and an important addition to this programme during the year was the initiation of production of a Canadian developed towed sonar. Plotting tables, gyro compasses and electro-magnetic log equipment were associated items of shipborne equipment which continued to be produced during the year.

Considerable development in the sonobuoy field took place during the year. A preproduction programme for a new type was initiated, and interest was shown by the United States Navy in proposals to extend the life of the existing sonobuoy. A long life moored sonobuoy was produced and tested during the year and considerable United States interest was also shown in this. Production of radiation monitoring equipment was initiated and development of improved items was begun.

In the airborne electronics field, production continued on ultra high frequency transceivers, identification, doppler navigation, and instrument landing equipments. Procurement in connection with the CF-104 aircraft programme was initiated for the NASARR fire control radar, bomb and missile launch computers, optical sight requirements and TACAN navigation. Procurement support was provided for several of the Defence Research Board projects in infrared missile research and weapons systems analysis.

A significant area of activity continued to be that of electronic training aids. Complex instrument, bombing, flight and anti-submarine tactical simulators were being designed and built in Canada, while a naval tactical trainer and an aircraft simulator were procured in the United Kingdom. A contract for the development and production of coding desks, an automatic mail sorter, and a prototype automatic sorting system evaluation was negotiated on behalf of the Post Office Department.

A major change in the responsibility for the operation and maintenance of the Mid-Canada radar line was negotiated and new contractors introduced on a cost incentive bonus plan for the first time in a major maintenance contract. Progress was also made in the introduction of incentives into repair and overhaul contracts. Production was initiated in Canada on several items of electronic test equipment which had previously been imported.

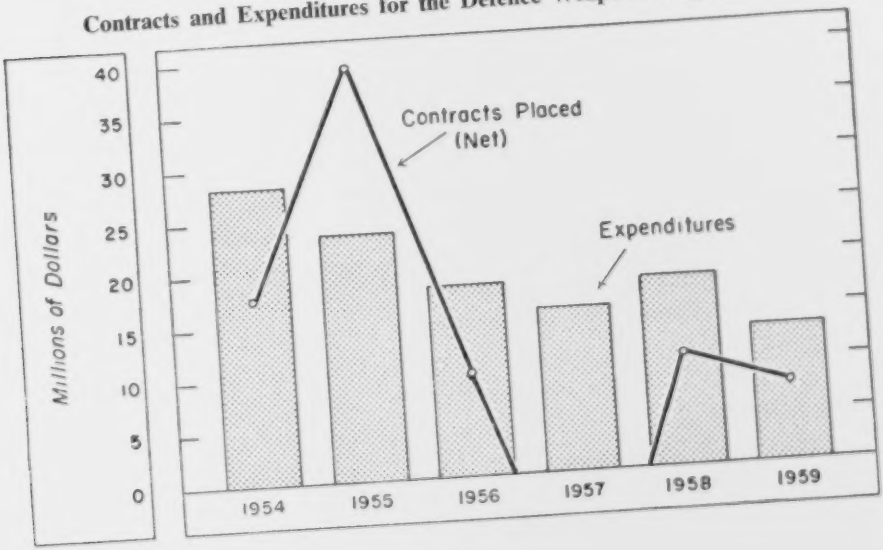
A strong effort was made during the year to benefit from the defence production sharing programme with the United States. The initial emphasis was placed on the air defence programmes involving installations in Canada, and an increased effort was made in the anti-submarine warfare and missile fields. In the development sharing area, activity was directed at reviewing United States requirements and identifying promising items for Canadian research and development.

In order to increase the percentage of Canadian content in all electronic equipment made in this country for both Canadian and United States defence requirements, a continued effort was directed towards support of component qualification approval and component development programmes. Identification of the components to be supported, in the absence of major system or equipment development in Canada, requires direct action by the Department in this field. In this way the Department can make an important contribution to future Canadian technological progress in this area of production.

Guns

Production was completed in 1959 on the third order of 105mm howitzers for the Canadian Army and on two substantial orders for long-term howitzer spares. These spares are for the support of Canadian holdings of howitzers as well as those which were given to other NATO countries under the Canadian mutual aid programme. Production of anti-submarine torpedoes for the Royal

Contracts and Expenditures for the Defence Weapons Programme



Canadian Navy was also completed, but the manufacture of this item was continued to fill an order from the United Kingdom for a large number of torpedoes for the Royal Navy.

Further deliveries of anti-submarine mortars and of weathershields for 3″/50 calibre Naval guns were made to the Royal Canadian Navy. Shipments of the 7.62mm C-1 (FN) rifle, the heavy barreled automatic version of this weapon, and the 9mm sub-machine gun continued to be made to the Canadian Army. Initial action was taken to provide for the manufacture of long-term spares for these three weapons while the production lines were still set up. Deliveries of a Canadian designed artillery director were begun in 1959.

A quantity of 3″/70 calibre twin Naval guns and mounts was ordered in the United Kingdom, with deliveries timed to fit in with the new destroyer escort construction programme. In addition to the torpedo contract placed in Canada by the Royal Navy, the British army placed an order for the supply of long-term spares for pistols in this country.

Shipbuilding

Five destroyer escorts were completed and delivered in 1959, thus completing the second programme of seven anti-submarine destroyer escorts known as the Restigouche class. HMCS GATINEAU was commissioned in February, HMCS KOOTENAY in March, HMCS TERRA NOVA in June, and HMCS CHAUDIERE and HMCS COLUMBIA in November.

Construction of the first of a third group of six destroyer escorts, a repeat of the Restigouche class, continued in the lead yard during the year. A contract was placed with a West Coast shipyard for construction of the hull of the second vessel of this class; the fitting-out of this escort will be done by a second West Coast yard. With but minor exceptions, contracts were placed for the majority of components for the repeat Restigouche programme. Operations commenced at the central procurement agency under the supervision of this Department. This procurement agency procures those items that are worked into all the vessels, allocates them to other shipyards as required, and handles the accounting for these bulk purchases.

Invitations to tender were issued to the Canadian shipbuilding industry for the construction of a Naval tanker-supply vessel on a normal commercial fixed price basis. This is the first time that a major Naval vessel has been procured by this method. One of the qualifying factors in the invitation to tender is a requirement that, subject to availability, components and materials are to be manufactured in Canada. Firms were supplied with a detailed "Bill of Quantities" for this vessel on which they were to base their bids.

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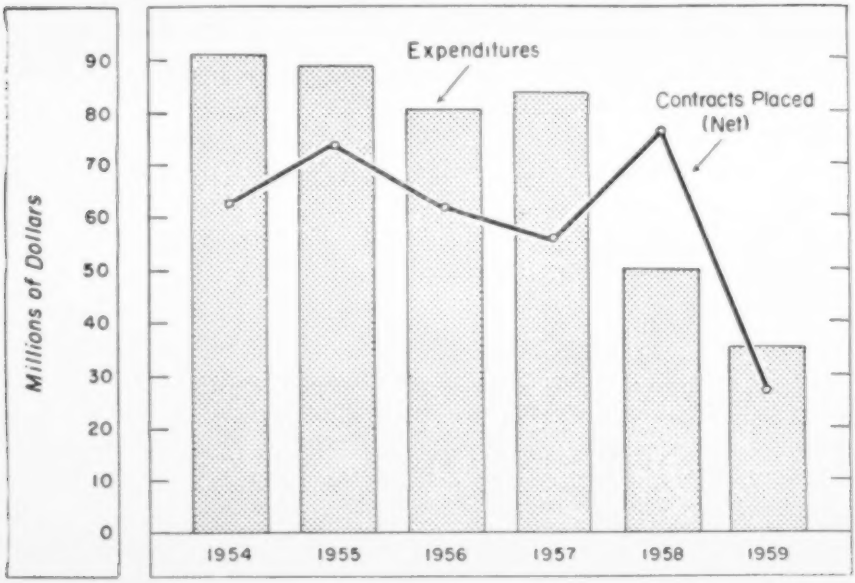
Contracts and Expenditures for the Defence Ships Programme



Invitations to tender on a normal commercial fixed price basis were also issued for the construction of a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys.

An acoustic calibration barge was completed and delivered to the Defence Research Board in July. There were 54 small boats under construction in 1959, these varying in size from 27-foot whalers down to 14-foot dinghies. Forty-seven of these small craft were completed during the year and the remainder are scheduled for completion in 1960.

Repairing and refitting of Naval ships in 1959 involved the placing of 72 contracts valued at over $5 million. A study of the control procedures for Naval repair and refit programmes was undertaken to enable refinements to be made within the Departments of National Defence and Defence Production and the shipyards. A further review of shipyard facilities was made to support this study. Five contracts were issued for the installation and repair of degaussing equipment.

Investigations were made with a view to establishing production facilities in Canada for the manufacture of five-bladed noise reducing propellors. Preliminary meetings were held with two other Government Departments to determine the extent of interest by industry in the production of high quality steel by the vacuum degassing process.

The Shipbuilding Branch co-ordinated the activities of 55 Canadian firms under the production sharing programme.

Machine Tools and Gauges

Machines and machine tools valued at $1 million were procured in 1959, primarily for the Department of National Defence and Canadian Arsenals Limited. This was about the same value as in 1958. The items purchased were mainly standard maintenance and repair shop equipment. A large lathe having a swing of 36 inches and a distance of 62 feet between centres was built in Canada for turning and boring special tubes for the Defence Research Board.

Machines continued to be transferred, as required, from warehouse stores and from contractors completing production contracts to other contractors commencing production of new items. Each equipment was inspected thoroughly prior to the transfer. Machine tools were modified and rebuilt for the Armed Services and for Canadian Arsenals Limited, as well as for the Department's care, maintenance and custody programme.

Gauges purchased for the Inspection Services of the Department of National Defence were valued at $67,000 in 1959, less than one-half the value purchased in the preceding year.

During the year, the Machine Tool Branch was called upon to a greater extent by the Armed Services and the Department's production branches for technical appraisals of plant facilities and for the reallocation and transfer of Crown-owned equipment which removed the need of purchasing new machines.

General Purchasing

The procurement of supplies and services not normally requiring special production facilities continued to be handled by the General Purchasing Branch through its headquarters organization in Ottawa and fourteen district offices located in the principal centers across Canada. The value of these general purchases was approximately $176 million in 1959 and they required the issuance of 153,000 contractual documents.

Materiel procured at headquarters included such items as clothing, footwear and leather goods, medical and dental stores, canned foods, petroleum products and hard fuels, electrical equipment and cable, furniture and furnishings, building supplies and hardware, barrack equipment and naval stores, as well as mechanical transport, construction, road maintenance and aircraft ground support equipment, together with their necessary maintenance spares and servicing. Services included aerial surveys, engineering, food catering, and certain research and development projects. In this latter field, contracts were awarded for work in

such widely diversified fields as the development of fabrics that will afford protection against nuclear, bacteriological and chemical warfare; the extension of certain research and development programmes with Canadian universities; and for further development of a family of light tracked vehicles known as the Bobcat. The Bobcat programme has now reached a point where engineering trials and tests are being conducted on prototype vehicles.

Contracting for repair and overhaul services on long life items, such as cameras, aircraft ground handling equipment and fire fighting equipment, continued to be an area requiring extensive negotiations in order to improve the types of contracts placed. Contracting for aviation fuels was arranged on a modified area basis in order to take advantage of local supply trends. The earlier practice had been to select the lowest overall aggregate tender.

The Canadian Army's new role in civil defence necessitated substantial increases in the procurement of medical and surgical equipment, litters, floodlights, generators, ladders and demolition jacks. In conjunction with Inspection Services, the Branch was successful in reducing the incidence of unsatisfactory preproduction samples on clothing and textiles by requiring the contractor to pay a nominal fee for the examination of second samples. The practice of purchasing commercial type vehicles on an as and when required basis, which had been introduced in 1958 on an experimental basis, proved successful and was made standard practice in 1959. The advantages of this type of buying also warranted its extension on a selective basis to certain other commodities, such as standard automotive spare parts and batteries, which formerly required intermediate warehousing by the Service concerned.

Canada's participation in the Colombo Plan continued to require purchasing for the Governments of India, Pakistan and Ceylon. Contracts were arranged to provide for the setting up of technical schools, maintenance service and carrier communication equipment for electrical power lines, as well as the purchase of 1,800,000 Douglas fir railway ties valued at $2.5 million and 45,000 tons of fertilizer valued at approximately the same amount. Purchases for Pakistan included steel transmission towers, reinforcing steel bars, sluice gates, and crane shovels, in addition to quantities of bleached sulphate pulp for the manufacture of newsprint and book paper. The major contribution to Ceylon was the continuation of a resources survey, which included a programme of aerial photography and mapping. This survey has provided very satisfactory results and is of prime importance in the development of that country's resources. Wheat and flour purchases for the Colombo Plan, various United Nations relief agencies, and other international endowments totalled almost $5.5 million. Purchases of these products on behalf of the United Kingdom Government for troops in Germany and for the Island of Malta were in excess of $500,000.

The fourteen district purchasing offices across Canada continued their essential role of arranging for services required by the defence establishments located in their vicinity, as well as purchasing fresh food and supplies of a local or urgent nature. The programme for improvement in administrative operation was extended to all district offices during the year and, as a result of modified procedures, there was a noticeable reduction in the time required to process individual requisitions. Greater emphasis on area procurement also reduced administrative costs and resulted in better deliveries of the required goods. At mid-year, a new ocean shipping service from Halifax to Goose Bay, Labrador, was opened to compete with the established service from Montreal. This made it feasible to call for quotations FOB destination instead of FAS Montreal, and to invite suppliers in the Maritime provinces to submit tenders. The Queen's visit involved all district offices to some extent but the major impact was on Montreal, Saint John, N.B., and Halifax. Provisioning and refuelling HMS BRITANNIA was arranged at a number of locations. The fourteen district purchasing offices issued 139,000 purchase documents having a total value of $61.5 million in 1959; both the number of documents and their value were slightly higher than in 1958.

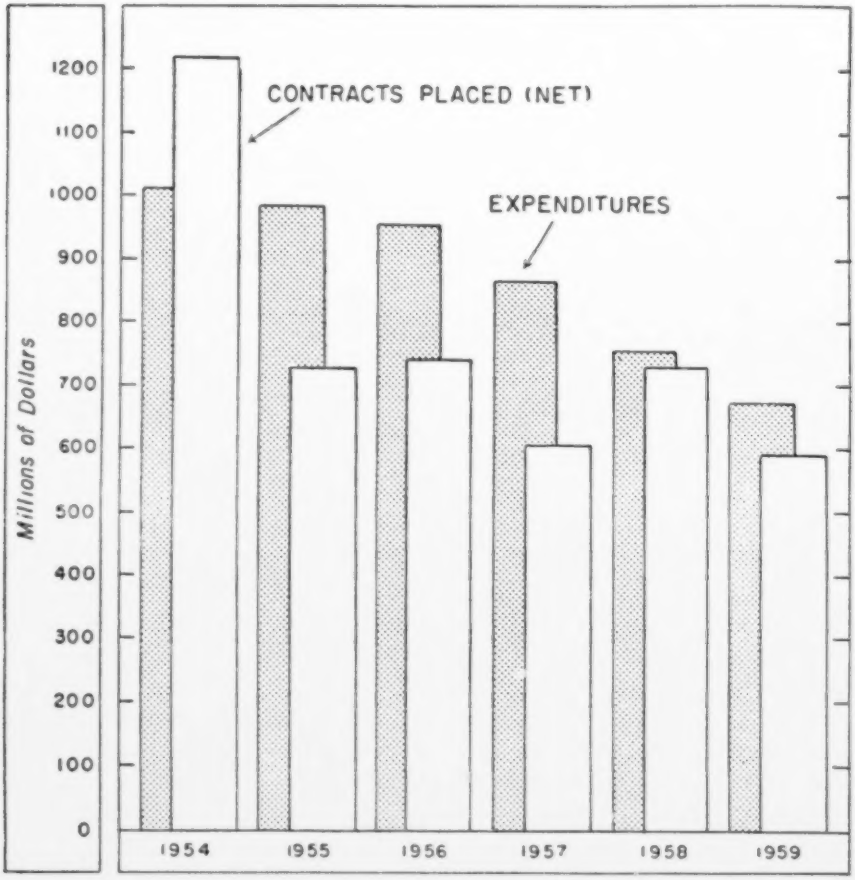
Contracts and Expenditures

Defence procurement and construction contracts placed for the Department of National Defence amounted to a net value of $591.6 million in 1959. This was a 19 per cent decrease from the 1958 figure. (The net value of contracts placed takes account of the value of amendments which increased or decreased existing contracts as well as the value of new contracts issued.) With the exception of electronics and communication equipment, the major defence equipment programmes registered decreases in the net value of contracts placed during the year. Contracts for fuels and lubricants and for construction increased slightly, while the value of contracts for clothing and equipage tripled in 1959. The $591.6 million net value of contracts placed in 1959 was made up of $494.8 million in new contracts, $208.9 million in amendments that increased existing commitments, less $112.2 million in amendments that decreased existing contracts.

Contracts and amendments issued for the aircraft programme had a net value of $202.6 million in 1959, one-third less than in 1958. The aircraft programme accounted for 34.3 per cent of the total net value of contracts placed in 1959, as compared with 41.1 per cent in the preceding year. The major new contractual commitments were in connection with the CF-104 Starfighter strike aircraft and the Albatross rescue aircraft. Contracts having a total net value of $82.3 million were placed for the electronics and communication equipment programme in 1959. This represented an increase of 12.1 per cent over 1958.

Major items of this programme included the NASARR fire control system for the CF-104 Starfighter, and flight and tactical trainers. Defence construction contracts, totalling $67.1 million in 1959, were at about the same level as in 1958.

Net Value of Contracts Placed on Behalf of the Department of National Defence and Expenditures against such Contracts



Expenditures on Canadian defence procurement and construction amounted to $673.4 million in 1959, 11.1 per cent less than in 1958. Most of the major equipment programmes registered declines. Expenditures on the ammunition and explosives programme, however, increased by one-third; and spending on electronics and communication equipment was almost unchanged at $100 million. Defence construction expenditures were up by almost 40 per cent over 1958.

About 36.5 per cent of all spending on defence procurement and construction in 1959 was accounted for by the aircraft programme, compared to 45.0 per cent in 1958. The next major spending programmes were electronics and communication equipment with 14.8 per cent, construction with 10.1 per cent, fuels and lubricants with 6.0 per cent, and ships with 5.2 per cent.

Eight per cent of the total net value of prime contracts issued was placed abroad in 1959, as compared to 2.7 per cent in 1958 and 9.0 per cent in 1957. (The low proportion of 2.7 per cent in 1958 was largely due to reductions in the value of some older contracts for Government-furnished aircraft equipment and to the termination in that year of the Astra and Sparrow programmes.) The proportion of expenditures paid directly to defence contractors located outside Canada was 6.7 per cent of total payments on defence procurement and construction. This is down slightly from the 7.7 per cent in 1958 and 7.5 per cent in 1957.

The United States continued to receive the largest share of prime defence contracts placed outside Canada in 1959. The net value of contracts placed in that country was $30.2 million, three times the value in 1958. As noted above, however, the low value in 1958 was due to large decreases to and the termination of existing contracts. The major new commitments in the United States involved royalty and reconfiguration agreements for Canadian production of the CF-104 and the purchase of a small quantity, too few for economical production in Canada, of Albatross rescue aircraft. Payments to prime contractors in the United States came to $31.3 million in 1959, almost one-quarter less than in the previous year.

Contracts and amendments placed in the United Kingdom were valued at $14.4 million in 1959, as compared with $6.1 million in 1958. The major new defence commitments in the United Kingdom were for 3″/70 calibre naval guns and for the repair and overhaul of aircraft and aircraft engines. Total payments to United Kingdom prime contractors amounted to $10.8 million in 1959, a decline of 17.9 per cent from the previous year.

United States Government defence prime contracts placed by the Department increased to a net value of $75.2 million in 1959 from $68.2 million in 1958. The major United States purchases in Canada were for spares for Beaver, Otter and Caribou aircraft and for aircraft engines, arctic radar sets, co-ordinate data monitors, aircraft alarm doppler spectrum analyzers, cable connectors, nitroguanidine, depot level maintenance for electronic communication equipment and division components for area type communication systems, provisioning of a channel submarine cable system, re-supply support for certain Distant Early Warning (DEW) stations, and the maintenance and operation of a long lines

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communication system. Payments made by the United States Government on account of prime defence contracts placed in this country amounted to $73.3 million in 1959, an increase of 26.8 per cent over 1958.

The figures above for Canadian defence purchases in the United States and the United Kingdom, and United States Government purchases in Canada, refer only to prime defence contracts. They do not reflect the indirect effects of subcontracting or the purchases of components, materials, or services by the prime contractors. Some information on this area of defence production activity is contained in the production sharing section of this Report.

In addition to the defence contracts described above, the Department placed orders value at $24.7 million in 1959 for other Canadian Government departments and agencies. This was about the same value of contracts as in 1958. These contracts were mostly for the Canadian civil defence programme and for Canada's contribution to the Colombo plan. A $3.5 million contract for torpedoes was placed with a Canadian firm for the United Kingdom Government.

A statistical summary of defence contracts placed by the Department of Defence Production and Defence Construction (1951) Ltd., and of expenditures by the Department of National Defence against these contracts, is given in Appendix F of this Report.

Defence Production Sharing

An important part of the Department's activities during 1959 was devoted to the Canadian-United States defence production sharing programme which was initiated in the fall of 1958. This programme represents an extension of the integration of Canadian and United States measures for continental air defence under the North American Air Defence (NORAD) agreement, and reflects the growing complexity and cost of modern weapon systems which involve exacting engineering and production capabilities for relatively short production runs.

The programme is carried out under the general aegis of the Canada-United States ministerial committee on joint defence. Its functional components include a Senior Policy Committee comprised of senior officials of the Canadian Departments of Defence Production, National Defence, External Affairs and Finance, and of the United States Department of Defense; a Steering Group to handle the co-ordination of all activities; and a number of Working Groups consisting of technical personnel to work out the detailed arrangements for production sharing of specific projects of mutual interest.

At the beginning of 1959, production sharing arrangements were based mainly upon four projects of mutual Canadian-United States interest: the Bomarc anti-aircraft missile, the semi-automatic ground environment (SAGE) control system, heavy radars and gap fillers for the radar lines. Activity during the first half of 1959 was directed primarily toward the development of procedures which were necessary to provide adequate opportunities for Canadian industry to participate in United States defence production. It soon became apparent that in order to establish equal opportunity for Canadian industry the programme had to extend beyond the original four projects. It was agreed that the production sharing programme would cover a wide range of United States defence programmes in which Canadian industry could establish its ability to compete with American industry on the basis of technical competence, delivery and price.

On this basis, a broad list of defence programmes was jointly developed and specific items were agreed to by each of the three United States military departments for exemption from the Buy American Act through a revision of the Buy American regulations. The United States Armed Forces procurement regulations were amended to provide for these broadened opportunities and to permit duty free entry from Canada of military hardware ordered by United States defence contractors for production of the items listed by the American military departments.

Revisions were also made to United States security procedures which made it possible for Canadian firms to acquire information on classified United States defence programmes on the basis of their security clearance by the Canadian

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Government. Arrangements were made for the Canadian Government to assist as required in the administration of both United States prime and sub-contracts placed in Canada under the production sharing programme, and procedures were developed to provide for quality control inspection of American defence contracts placed in this country.

At mid-year, the Senior Policy Committee concluded that the United States Government had made most of the relaxations and concessions in its military procurement regulations that were considered necessary to provide adequate opportunity for Canadian industry to participate in United States defence production. It was then agreed that an intensified effort should be made both in Canada and in the United States to ensure that government defence procurement agencies and defence contractors were familiar with the aims and objectives of defence production sharing and the procedures which had been established.

Every opportunity was taken to bring home to Canadian industry its responsibility to play an aggressive role in establishing its capabilities within the United States. This educational programme involved briefings at trade association meetings and visits by Canadian Government representatives to various Canadian industry centers. An example of this type of visit was the one made to British Columbia by the Minister of Defence Production in October, at which time a focal point was established to provide advice and assistance on production sharing procedures to West Coast firms.

The Department has appointed officers to major United States procurement centers and contracting areas, and has supplied officials in these centers with detailed, up-to-date reports of Canadian production facilities relevant to their procurement needs. In addition, some 160 Canadian firms were registered with 70 United States Government procurement agencies as competent suppliers of some 4,350 United States defence commodities. An alphabetical index of defence commodities produced by Canadian firms was prepared and distributed to potential sources of defence business in the United States.

The Department assisted Canadian firms to make direct contacts with the major United States contractors for programmes of a production sharing nature. A growing number of firms took the initiative in sending their representatives to visit contractors through the United States. During the year, some 115 Canadian firms visited many United States Government procurement agencies and about 100 of the major defence contractors.

A vigorous effort was made to acquaint the United States Government procurement agencies and their prime contractors with the aims and objectives of the production sharing programme and with the procedures established to permit and encourage Canadian participation in that country's defence production. As a

result, at least 20 major United States prime contractors made source screening visits to 100 Canadian firms. These American prime contractors have reported a sound capability across a broad front within Canadian industry, and they have assessed a few Canadian firms as having extremely high capabilities in special fields.

As evidence of the value of such visits, and of reciprocal visits by Canadian firms to the United States, activity in the field of bid solicitation and submission was substantial and increased steadily in 1959. In the subcontract field, some 1,900 invitations to bid were sent to Canadian firms and approximately 1,400 bids were submitted by Canadian industry. From these bids some 365 subcontracts valued at $45.3 million were placed in Canada.

The Department received an appropriation of $1,250,000 from Parliament in 1959 in order to maintain diversified defence production activity in Canada, primarily in the electronics and aeronautical fields, by putting selected areas of Canadian industry in a position to quote competitively with United States sources in established United States programmes. Normally, the American contractor has an advantage because most of his preproduction and tooling costs have been written off under previous contracts. This fund is used to absorb part of the Canadian contractor's preproduction and tooling costs, thus putting him in a more equitable competitive position with United States contractors. Contracts utilizing $856,000 of this appropriation were issued, of which $454,000 was spent by the end of the year, to establish capacity for the production of magnetron tubes and to absorb a portion of the preproduction and tooling costs involved in the manufacture of antennae, power supplies and rigid radomes.

Experience during the first half of the year revealed that Canadian defence production technology can be maintained at an adequate level only by participating in the development of United States defence weapons systems as well as in sharing in their production. Consequently, emphasis was placed on a programme of development sharing with the United States as an essential component of the production sharing effort. Development sharing procedures were evolved to the point where specific procedures and agreed principles of control and management were established with the United States Air Force and the United States Army, and were under discussion with the United States Navy.

Five million dollars was made available to the Department to begin a long-term defence development programme aimed at maintaining and improving Canadian industry's scientific and technical competence so that it will be able to share to a greater extent in future United States defence production programmes. A committee of representatives of interested Canadian Government departments was set up to review and recommend the support of suitable development projects,

and to monitor the funding and control of such programmes. Development projects approved by the end of the year included a 500 HP turbine engine, Caribou aircraft improvement, a metal frame radome and a doppler navigation aid.

United States defence contracts of a production sharing nature placed with Canadian firms amounted to $96.3 million in 1959. This includes $51 million[1] in prime contracts from the American military departments and $45.3 million in subcontracts from their contractors. Of perhaps greater significance, however, were the opportunities created for Canadian participation in United States defence production programmes through the many hundreds of invitations to Canadian firms to submit bids to Government agencies and contractors in the United States.

[1] It is not possible to compare this $51 million of United States prime production-sharing-type contracts placed in Canada with the $75.2 million total net value of United States prime contracts placed in Canada as shown in Table 6-a, of Appendix F. Different procedures and concepts were used in compiling these two sets of figures.

Industry and Defence

DIRECT procurement and construction activity in connection with the Canadian defence preparedness programme represented less than 2 per cent of this country's gross national product in 1959, based on payments to prime defence contractors. This was a decline from 2.2 per cent in 1958, reflecting as in the past few years the combined effects of reduced activity in a number of defence programmes and a continued increase in the non-defence sector of the national product. Manpower and materials were in adequate supply to meet the needs of the defence production programme, although Departmental assistance continued to be required to ensure the adequate flow of materials.

Defence production is a significant determinant of activity in only a few Canadian industries, as civilian demand is the key factor in most industries in this country. The aircraft industry is the largest of the Canadian industries predominantly dependent on defence business. Production and employment in this industry fell off substantially immediately following the termination of the Arrow aircraft and Iroquois engine programmes in February. After a period of readjustment, employment in the industry in the latter half of the year continued the gradual decline that was evident during 1958. With the completion of the Restigouche class destroyer escorts, shipyard activity was lower in 1959 than in the preceding year; construction on the new repeat-Restigouche group of escorts was not sufficiently advanced to take up much of the slack. Activity in the electronics, ammunition and construction sectors of the defence programme continued strong in 1959, but a decline took place in the weapons sector.

An important factor in maintaining an industrial base in Canada adequate to meet the continuing needs of defence preparedness has been the effort to provide a greater degree of participation by Canadian industry in United States defence projects through the production sharing programme. Allied with this is the need for Canadian industry to maintain a high standard of engineering and technical competence if it is to obtain a reasonable share of the production requirements of complex current and future weapons systems. This can be most effectively accomplished through the sharing of defence development as well as defence production. The assistance that was given to Canadian industry and the success that was achieved in these programmes in 1959 are covered elsewhere in this Report. In a number of areas, Canadian industry's research and development capabilities produced new requirements for the military Services. Some of these successful developments have also been mentioned in preceding sections of this Report.

Funds were made available to the Department in 1959 for a programme of source establishment in Canada for electronic component parts and materials essential to the production of modern military electronics. These funds are to establish qualified sources of supply sufficiently in advance of requests from the Department of National Defence to ensure the maximum participation of Canadian firms in defence procurement, particularly in the electronics field, thus lessening the dependence of Canadian producers on United States and other sources of supply. A further aim is to prove the capability of producing a requirement at a highly competitive price as well as to required performance standards, thus enabling Canadian sources to meet United States as well as Canadian demand. Contracts valued at $356,000 were issued in 1959 to provide for the establishment of qualified sources for the production of certain types of potentiometers, synchros, capacitors, resistors, sensitive switches and travelling wave tubes and for an engineering study to establish a ceramic manufacturing facility.

The Department continued to encourage private industry to provide its own investment in the capital equipment required for defence production. In this way, defence production capacity would be more readily integrated into the general structure of Canadian industry. In a few cases, however, direct Government investment and financial incentives were necessary to ensure the capacity essential to defence requirements. In 1959, this Government assistance to private industry was small. The value of Government-financed capital assistance projects that were approved during the year amounted to $2.4 million, most of which was for the extension of a runway at the Cartierville, Que., airport. Expenditures in this area of assistance to industry amounted to $695,000 in 1959. Title to all capital assistance assets remains with the Crown, and the contractor responsible for their use is held accountable for their proper maintenance.

Additional capital cost allowance for income tax purposes (accelerated depreciation) was granted to some contractors on capital investment primarily for defence production or production supporting activity. Interim certificates for accelerated depreciation were granted on an estimated $2.5 million worth of capital assets in 1959. These assets were mainly required for the extension of steel fabrication facilities and the production of ships' propulsion machinery.

Crown-owned assets were rented to contractors for non-defence work in the interest of further integrating defence production equipment into the civilian sector. At the end of 1959, assets having a purchased value of $17 million were authorized for rental by private firms for commercial use. In all cases, the interest of the Crown in future use of these assets for defence production purposes was protected and the prices charged were such as to assure a fair return to the Crown on the assets concerned.

Where it was not possible to keep specialized production facilities operating, either within the defence field or through the development of production for civilian markets, certain assets were maintained in a state of readiness. Some $216,000 was spent in 1959 on the care, maintenance and custody of standby Crown-owned defence production facilities and equipment as a guarantee of future availability.

Canadian mutual aid to NATO countries involving new production items has ceased to be a major contributing factor in the maintenance of certain defence production facilities. Deliveries in 1959 consisted of lifetime spares for 155mm howitzers. Expenditures for this direct production portion of the mutual aid programme were $478,000, down from $1.5 million in 1958.

Materials Supply

The strikes in United States basic materials industries throughout 1959, which dominated the North American material supply picture, caused relatively little dislocation of Canadian defence, atomic energy and production sharing programmes. Departmental assistance kept most programmes effectively on schedule. Canadian production of prime metals and semi-fabricated materials satisfied domestic requirements while other types of metallic and non-metallic materials again depended on allocations under the United States Defense Materials System to satisfy the needs of Canadian defence and related programmes. Plans for the expansion of existing plant facilities and the development of new mills in the Canadian prime metals and basic materials fields were announced in 1959. Such expansion will broaden the trend toward self-sufficiency and will progressively decrease Canada's dependence on foreign sources for defence materials.

Defence and atomic energy requirements for helium gas increased in 1959. Canadian quotas were established by the Department under the United States helium allocation system as a result of detailed surveys of essential consumers. Satisfactory minimum shipments were maintained until the fall when full production from a large new United States Government plant at Keyes, Oklahoma, removed the need for the allocation and quota systems. Since then helium has been in plentiful supply. The possibility of producing helium from Western Canada gas fields is being surveyed although tests to date show it to be uneconomical using present methods of extraction.

A substantial increase in continental demands for aluminum resulted in the reopening of many potlines and facilities previously curtailed. The expanding use of special high quality alloys in the missile, electronics and aviation fields indicate a continuing upsurge in demand on present operating facilities. Heavy aircraft

plate was the only mill form not available from Canadian mills for defence projects. Departmental assistance at the fabricating level assisted in maintaining defence schedules.

All outstanding requisitions for the acquisition of strategic materials for the Canadian stockpile were completed. Thus, the related contracts were amended in 1959 to provide only for continuing storage charges in connection with the holdings of raw quartz, tin, antimony, activated carbon, cobalt and hexachlorethane.

The American steel strike caused the United States Government to postpone proposed amendments to the priority regulations of its Defense Materials System until December, when they were made effective. The purpose of the amendments was to continue the Defense Materials System, with certain important changes and major simplifications, to support United States defence, atomic energy and related programmes, and as a mobilization preparedness measure which could be expanded or converted readily to meet the needs of stepped up or full mobilization. The methods used by Canada to participate in the United States system will require only minor modifications.

Throughout the year there was a broader use of United States priority ratings and a substantial increase in requests for special expediting assistance on materials and components of American origin needed to maintain schedules of certain Canadian defence and atomic energy programmes. Satisfactory results were obtained. Major Canadian defence programmes were again listed on the United States "Master Urgency List" to ensure comparable treatment of Canadian orders and equitable distribution of critical military components and strategic materials.

Organization and Administration

Emphasis on defence production sharing with the United States required the establishment of an Office for the Canadian Co-ordinator of Production Sharing in the Deputy Minister's Secretariat early in 1959. Otherwise, the organization structure of the Department remained unchanged during the year.

Personnel on strength increased from 1,445 at the end of 1958 to 1,463 at the end of 1959. Of the latter number, 1,147 were located in Ottawa, 233 were employed in offices elsewhere in Canada, and 83 were employed outside the country. The increase in staff at the end of 1959, the first such increase in seven years, occurred as a result of the additional staff needed for the production sharing programme and the ability of the Department to obtain technical personnel through intensive recruiting activity and generally favourable employment conditions. Qualified personnel were recruited in the aeronautics, electronics and weapons fields, particularly for development and production sharing activity. In addition, the Department recruited cost analysts, estimators, field production officers and district office buyers. Seventy-two competitions were held to fill positions in the Department. There were 252 new appointments, 233 terminations, and 114 inter-branch transfers during the year; these were all greater than in 1958.

An organization chart of the Department as at December 31, 1959, appears as Appendix A to this Report. The senior personnel at that date are listed in Appendix B, and the distribution of staff by units of the Department is shown in Appendix C.

Five Crown Corporations, whose work is closely allied with that of the Department, continued to report to Parliament through the Minister of Defence Production. A list of these companies and their principal officers is given in Appendix D. An account of the activities of these Crown agencies is contained in their respective Annual Reports.

Production and Purchasing Branches

The procurement of defence supplies requiring specialized production facilities remained the function of six production branches: Aircraft, Ammunition, Electronics, Gun, Machine Tool, and Shipbuilding. The General Purchasing Branch continued to be responsible for the supplies and services not normally requiring special production facilities. District Purchasing Offices in fourteen cities across Canada procured the supplies and services of a local or urgent nature required by defence establishments in the vicinity of the offices.

Most procurement from European and United States sources continued to be handled by offices in England, Continental Europe and the United States.

The London Office conducted all procurement activity of the Department in the United Kingdom and directed the activity of sub-offices which handled procurement in Continental Europe. This Office procured from United Kingdom Government agencies, such as the Admiralty, the Ministry of Aviation and the War Office, and from a great variety of commercial firms. A small sub-office continued to operate at Renfrew, Scotland, to expedite the repair and overhaul of aircraft and equipment for the Air Division in Europe. Procurement in France, chiefly through the Government of France, was undertaken by a sub-office in Paris; and procurement in the Federal Republic of Germany, chiefly through the Government of that country, was carried out by a sub-office in Koblenz.

The Washington Office continued to handle procurement from the United States Armed Services and, in some exceptional cases, from commercial firms in the United States. Practically all procurement from United States commercial sources was made directly by the appropriate production or purchasing branch in Ottawa. The Washington Office also maintained regular liaison with many United States Government agencies, handled Canadian participation in the United States priorities and expediting systems, and supplied a wide range of information to Canadian Government officials. This Office spent an increasing amount of time in connection with the Department's production sharing activities, which are reported elsewhere in this Report. In this connection, it handled a large number of inquiries and arranged numerous meetings involving Canadian and United States Government officials, contractors and sub-contractors. The Washington Office directed the activity of a sub-office at Wright-Patterson Air Force Base, Ohio, involving operations with the Air Materiel Command of the United States Air Force, and provided administrative services for Departmental representatives at New York City and Rome, N.Y., Seattle, Washington, and Los Angeles, California.

A list of the field offices of the Department is given in Appendix E.

The Department continued to be represented by two members on the Canadian Delegation to the North Atlantic Council in Paris, France. These members are responsible for liaison with other national delegations and with the NATO international staff, and for making the Canadian viewpoint known on defence production matters which are of common concern to several members of the Alliance. They represent Canada on the NATO Armaments Committee which, in turn, controls a wide variety of expert working groups. In addition, they have a number of duties in Committees of the NATO Council that are engaged in emergency supply planning.

Advisory and Service Branches

The Administration Branch continued to conduct the personnel operations of the Department, provide office equipment and services, maintain a central transcribing pool, and carry out programmes of administrative and personnel improvement.

Orientation and training for new employees, and training and development for permanent employees, comprised the major activity of the Training and Development Division. A second advanced pricing course for senior personnel of the Department was successfully completed. The graduate engineer training programme entered its second year with the employment of five more graduate engineers.

In addition to a number of special and continuing projects, the Methods Division revised the filing system in the Minister's Office, initiated a methods and procedures study in the Industrial Security Branch, and provided the administrative services for the suggestion award plan in the Department.

The Office Services Division continued to arrange for the supply of furniture and office equipment, and to direct alterations and the allocation of space and telephones. A major reallocation of space in one of the buildings occupied by the Department's staff was undertaken in 1959. District purchasing offices in Montreal and Toronto were given a full range of administrative services by the administrative officers located in those cities.

The Comptroller's Branch provided the accounting service for the Department and for the Canadian Commercial Corporation, a Crown company associated with the Department. Complete bookkeeping records, based as far as possible on commercial practice, were kept of the transactions against the Department's Parliamentary appropriations and of all assets and liabilities for which responsibility lies with the Minister of Defence Production. These assets include Crown-owned buildings and equipment in custody of private contractors or in warehouses. Their accounting involved physical identification in the field and the maintenance of a full inventory record by description, quantity and value. Test physical counts were also made during the year of the cloth and other materials carried in stock at various locations.

Records were also maintained of the transactions arising out of various uncleared accounts taken over from predecessor departments, and with respect to disbursements and deliveries on NATO account which were covered by funds transferred to this Department by the Department of National Defence. The Branch carried out the financial administration of all agreements involving the sale to contractors of Crown-owned land, buildings and equipment, and all net

revenues from the rental of Crown-owned factory and housing properties. In addition, the Branch continued to provide the financial administration of the Defence Production Revolving Fund.

The Central Inventory Records Division of the Branch continued to supply the supervisory services required at the Longueuil gun plant in connection with the disposal of the plant's equipment and inventories.

The Branch also maintained records of Department of National Defence equipment on loan to contractors through the Department of Defence Production, and contributed to the recording and administration work connected with the rental of Crown assets to contractors.

As in previous years, the Branch submitted monthly statements and reports to the Deputy Minister with respect to the Department's financial transactions. Similar statements and reports, on a quarterly basis, were submitted to the directors and responsible officers of Canadian Commercial Corporation. In the carrying out of the duties of the Branch, the Comptroller or his representatives attended various meetings with the Corporation directors and others during the year as required.

The financial position of the Department as at March 31, 1959, is shown in the Balance Sheet and related schedules given in Appendix G, duly certified and reported upon by the Auditor General's office.

The Economics and Statistics Branch continued to provide the general economic and statistical services required by the Department, which included the development of procedures for measuring the progress of the defence production sharing programme. The Branch recorded, tabulated and analysed statistics of requisitions received by the Department, contracts placed on behalf of the Department of National Defence and other requisitioning agencies, and payments made against these contracts. Projections of defence procurement expenditures were made to provide the Department with an estimate of future procurement activity and to assist the Department of National Defence in the preparation of its budgetary estimates. This required the co-ordination and analysis of expenditure data from major defence contractors and the maintenance of a close liaison with production officers.

The Branch also maintained liaison with the economic research and statistical units of other departments of the Government in order to obtain information necessary for an economic appraisal of the defence programme, and to provide them with data on the defence sector of the Canadian economy. Information relating to defence procurement activity was prepared periodically for the North Atlantic Treaty Organization. Various firms and organizations were supplied with material relating to the Department's procurement activities.

Lists of unclassified defence contracts valued at $10,000 and over awarded by the Department to firms in Canada were compiled and issued semi-monthly in the form of a press release.

The Financial Adviser's Branch acted in an advisory capacity with respect to the development and application of financial policies related to defence contracts.

All contract proposals involving commitments in excess of $10,000 were reviewed to ensure that the principal terms conformed to Departmental policies and that the procurement proposed properly reflected the requirement of the requisitioning Department. Special consideration was given to contract proposals for large commitments and to cases involving profit incentives. Submissions to Treasury Board were prepared and liaison with Treasury Board Staff was maintained.

The Branch reviewed reports prepared by the Cost Inspection and Audit Division of the Comptroller of the Treasury following the audit of contracts, and co-operated with that Division and the procurement branches of the Department to resolve cost and profit problems with contractors arising from such audits.

Applications from contractors for capital assistance or additional capital cost allowance (accelerated depreciation) were reviewed in the light of Departmental policy. Declarations being made to Crown Assets Disposal Corporation covering surplus capital assistance assets, tooling, and production material were also reviewed and approved. Rentals of Crown-owned assets currently on charge to contractors were assessed following an annual survey covering the use of these assets by contractors for other than defence work. Where contracts were cancelled or terminated because of revised requirements, negotiations were conducted with the contractors concerned to achieve a satisfactory settlement. In this connection extensive negotiations were carried out in connection with the cancellation of the CF-105 aircraft and Iroquois engine programmes. Advice was given on the application of sales tax, duty drawbacks and insurance coverage to defence contracts.

Consideration was given to such subjects as the application of administrative overhead to certain categories of defence costs, financial features associated with production sharing, and the up-grading of contracts in order to achieve lower costs to the Crown through providing profit incentives for the contractor. Investigations included a consideration of permissible allowances for overhead in computing rates for mobile repair parties and for technical and field service representatives. Studies on such matters as cost control aids in defence procurement and the authorization of overtime were completed. Special emphasis was

also given to the settlement of outstanding cost positions arising from production and capital assistance projects.

The Branch co-ordinated the preparation of the Department's estimated requirements, including the appropriations required by Crown companies responsible to Parliament through the Minister of Defence Production. The annual capital and operating budget submissions required from these companies under The Financial Administration Act were reviewed, as were their interim financial statements. The Branch also administered grants made in lieu of taxes to municipalities in which Crown-owned defence plants operated by private contractors are situated.

The Legal Branch drafted a large number of formal contracts covering the production of aircraft, electronic equipment and other defence supplies. This work was particularly heavy in regard to aircraft as a result of the new CF-104 programme, which required several lengthy licence agreements with United States manufacturers to enable the airframe, engine and fire control systems to be produced in Canada. Contracts were also necessary under this programme for the procurement of training aircraft and the reconfiguration of the manufacturer's original model as well as for the actual production of the aircraft in this country. Other contracts covered research and development, leases of Crown-owned facilities to industry for use in defence and other work, production of communication equipment, ships and ships' machinery, and the procurement of a variety of defence supplies for Canada's Armed Services and for the United States military departments.

The Branch advised other branches of the Department on the terms of proposed contracts, termination of contracts and claims by and against the Crown, gave legal interpretations of The Defence Production Act and of the terms of current contracts, gave legal opinions on a wide range of Departmental matters, and prepared some of the Department's submissions to the Governor in Council and the Treasury Board. It also advised in regard to assignment of contracts, title, risk, insurance, subcontracting, bankruptcy, patents, inventions, royalties, sales taxes, customs duties, and land matters. In the case of claims by or against the Department leading to litigation, or which might result in litigation, the Legal Branch furnished the Department of Justice with detailed information and worked with that Department throughout the proceedings.

In many cases, the solicitors of the Branch assisted purchasing and production officers of the Department during day-to-day negotiations with representatives of industry, and negotiated the legal content of formal contracts with solicitors representing the contractors. Legal work was also performed for some of the Crown Companies which report to the Minister of Defence Production.

The Secretary's Branch administered the Department's Communications, Printing and Stationery, Central Registry, and Service Divisions. The Secretary, as the Department's official signing officer, entered into formal contracts and conducted Departmental correspondence.

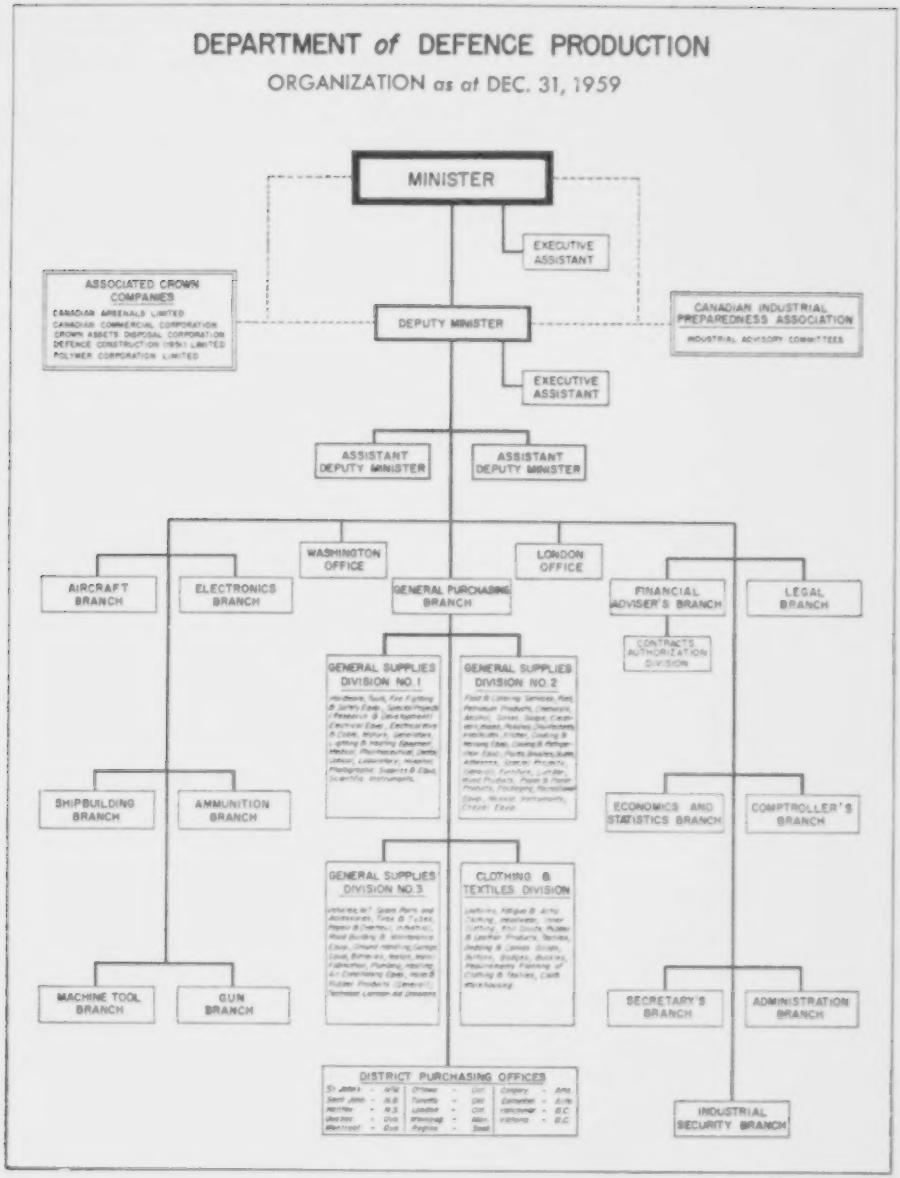
The Communications Division maintained a teletype service between Ottawa and the Department's offices in Montreal, Toronto and Washington. This service was made available to other Government agencies and was used extensively by them. Over 100,000 telegraphic or teletype messages were handled by the Division during the year. A "Telex" machine was installed to provide direct exchange of messages with other subscribers to this service.

The Central Registry was responsible for the control, movement and protection of over 150,000 Departmental files. During the year, continuing authority was obtained for the destruction of certain types of files three years after the completion of purchase action.

The Service Division provided the procurement branches with lists of firms capable of producing required items; reproduced and distributed invitations to tender and subsequent contracts; received, guarded and opened all tenders received at Head Office; and was responsible for answering enquiries regarding the award of contracts. The Division actively co-operated with the procurement branches in fostering Canada's role in the defence production sharing programme with the United States.

The Secretary's Office represented the Department on various interdepartmental committees and subcommittees organized under the Emergency Measures Organization and represented the Department in various discussions of possible supply problems in the event of an emergency. The Secretary also presented the views of the Department on points raised in a number of NATO questionnaires.

Appendix A


DEPARTMENT of DEFENCE PRODUCTION
ORGANIZATION as at DEC. 31, 1959
MINISTER
EXECUTIVE ASSISTANT
ASSOCIATED CROWN COMPANIES
CANADIAN ARSENALS LIMITED
CANADIAN COMMERCIAL CORPORATION
CROWN ASSETS DISPOSAL CORPORATION
DEFENCE CONSTRUCTION (1951) LIMITED
POLYMER CORPORATION LIMITED
DEPUTY MINISTER
CANADIAN INDUSTRIAL PREPAREDNESS ASSOCIATION
INDUSTRIAL ADVISORY COMMITTEES
EXECUTIVE ASSISTANT
ASSISTANT DEPUTY MINISTER
ASSISTANT DEPUTY MINISTER
AIRCRAFT BRANCH
ELECTRONICS BRANCH
WASHINGTON OFFICE
GENERAL PURCHASING BRANCH
LONDON OFFICE
FINANCIAL ADVISER'S BRANCH
LEGAL BRANCH
CONTRACTS AUTHORIZATION DIVISION
GENERAL SUPPLIES DIVISION NO. 1
GENERAL SUPPLIES DIVISION NO. 2
SHIPBUILDING BRANCH
AMMUNITION BRANCH
ECONOMICS AND STATISTICS BRANCH
COMPTROLLER'S BRANCH
GENERAL SUPPLIES DIVISION NO. 3
CLOTHING & TEXTILES DIVISION
MACHINE TOOL BRANCH
GUN BRANCH
SECRETARY'S BRANCH
ADMINISTRATION BRANCH
DISTRICT PURCHASING OFFICES
INDUSTRIAL SECURITY BRANCH

Appendix B

Senior Personnel of the Department

as at December 31, 1959

Minister

The Honourable Raymond O'Hurley, P.C., M.P.

Executive Assistant to the Minister	Bernard E. Poirier

Deputy Minister

D. A. Golden

Assistant Deputy Minister	G. W. Hunter
Assistant Deputy Minister	W. H. Huck
Executive Assistant to the Deputy Minister	F. A. Milligan

Production Branches

Director, Aircraft Branch	D. L. Thompson
Deputy Director, Aircraft Branch	A. D. Belyea
Director, Ammunition Branch	C. L. Muir
Director, Electronics Branch	D. B. Mundy
Deputy Director, Electronics Branch	S. I. Comach
Deputy Director, Electronics Branch	T. C. Jones
Director, Gun Branch	J. M. Dymond
Director, Machine Tool Branch	R. Mosher
Director, Shipbuilding Branch	J. C. Rutledge

General Purchasing Branch

Director	D. M. Erskine
Deputy Director	R. C. D. Laughton
Purchasing Agent, Clothing and Textiles Division	W. F. Smith
Purchasing Agent, General Supplies Division No. 1	G. S. Sheraton
Purchasing Agent, General Supplies Division No. 2	E. J. DeLisle
Purchasing Agent, General Supplies Division No. 3	C. B. Doheney
Supervisor, District Purchasing Offices	C. A. Drouin

Advisory and Service Branches

Financial Adviser	R. M. Keith
Deputy Financial Adviser	N. R. MacLean
Director, Contracts Authorization Division	J. D. C. Mahaffy
Comptroller	G. F. Wevill
Deputy Comptroller	T. E. Brown
Departmental Secretary	J. J. Tevlin
Director, Administration Branch	H. R. Kotlarsky
Director, Economics and Statistics Branch	W. J. W. V. Johnston
Director, Industrial Security Branch	L. C. Cragg
Director, Legal Branch	F. F. Waddell
Director, London (England) Office	R. D. Roe
Director, Washington Office	N. R. Chappell

Appendix C

Distribution of Departmental Staff

as at December 31, 1959

	Number of Employees
Minister's Office	12
Deputy Minister's Office	31
Aircraft Branch	140
Ammunition Branch	44
Electronics Branch	164
Gun Branch	16
Machine Tool Branch	27
Shipbuilding Branch	93
General Purchasing Branch—	
Administration	6
Clothing and Textiles Division	58
General Supplies Division Nos. 1, 2, and 3	133
District Purchasing Offices	164
District Purchasing Liaison Office	10
Administration Branch	69
Comptroller's Branch	87
Economics and Statistics Branch	34
Financial Adviser's Branch	50
Legal Branch	9
Secretary's Branch	205
Industrial Security Branch	28
Offices in the United States and Europe, and NATO Delegation, Paris	83
Total	1,463

Appendix D

Crown Companies Associated with the Department of Defence Production

as at December 31, 1959

Canadian Arsenals Limited

President	Major-General J. H. MacQueen
General Manager	J. H. Berry
Secretary-Treasurer	D. C. Cullen

Canadian Commercial Corporation

Secretary and Legal Adviser	F. F. Waddell
Comptroller	G. F. Wevill

Crown Assets Disposal Corporation

President and General Manager	Louis Richard
Secretary and Legal Adviser	K. H. Gray

Defence Construction (1951) Limited

President and General Manager	R. G. Johnson
Secretary	J. D. Jennison
Treasurer	N. Tokaryk

Polymer Corporation Limited

Chairman of the Board	E. J. Brunning
President and Managing Director	E. R. Rowzee
Vice-President, Operations	L. D. Dougan
Vice-President, Finance	S. Wilk
Vice-President, Marketing	Roger E. Hatch
Vice-President, Research and Development	E. J. Buckler
Secretary and Chief Legal Officer	W. J. Dyke

Appendix E

District Purchasing Offices and Offices Located Outside Canada

Addresses as at December 31, 1959

District Purchasing Offices

ST. JOHN'S, NFLD.	Buckmaster's Field, Building No. 40 (P.O. Box 487)
HALIFAX, N.S.	Room 527, Federal Building, Bedford Row (P.O. Box 1655)
SAINT JOHN, N.B.	Room 408, Sadim Building, Canterbury & Duke Streets
QUEBEC, P.Q.	126 St. Peter Street (P.O. Box 70—Station "B")
MONTREAL, P.Q.	1441 St. Urbain Street
OTTAWA, ONT.	953 Somerset Street, West
TORONTO, ONT.	25 St. Clair Avenue, East
LONDON, ONT.	388 Dundas Street
WINNIPEG, MAN.	Room 502, Post Office Building, Graham & Garry Streets
REGINA, SASK.	302, New Post Office Building
CALGARY, ALTA.	Room 725, Public Building
EDMONTON, ALTA.	906 Federal Public Building, 99th Ave. & 107 Street
VANCOUVER, B.C.	Room 407, Federal Building, 325 Granville Street
VICTORIA, B.C.	Room 318, Customs Building, Government Street

Offices Located Outside Canada

WASHINGTON, U.S.A.	Canadian Department of Defence Production, 2450 Massachusetts Ave., (P.O. Box 4897, Cleveland Park Station) WASHINGTON 8, D.C., U.S.A.
Sub-Office	MCL DDP Wright-Patterson Air Force Base, OHIO, U.S.A.
LONDON, ENGLAND	Department of Defence Production (Canada), Sackville House, 40 Piccadilly, LONDON W. 1, England
Sub-Offices	c/o Canadian Embassy, 35 avenue Montaigne, PARIS 8, France
	Viktoriastrasse 38, KOBLENZ, West Germany
	c/o Scottish Aviation Limited, Renfrew Airport, RENFREWSHIRE, Scotland

Appendix F

Statistics of Defence Contracts and Expenditures

The statistical tables in this appendix illustrate, in terms of the net value of contracts placed and the value of expenditures, the magnitude of various sectors of the Canadian defence procurement programme during the calendar years 1957, 1958 and 1959.

The tables are grouped in pairs, with the first (a) containing data on the net value of contracts placed and the second (b) containing the value of expenditures against these contracts and against similar contracts placed in earlier years.

Tables 1-a and 1-b to Tables 4-a and 4-b contain statistics related to defence procurement by the Department of Defence Production and Defence Construction (1951) Limited for the Department of National Defence. Payments for this procurement are made from funds appropriated by Parliament for the Department of National Defence.

Tables 5-a and 5-b relate to certain activities in support of the defence production programme which are paid for from Defence Production Parliamentary votes.

Tables 6-a and 6-b provide data relating to defence contracts placed in Canada by the United States Government through the Canadian Commercial Corporation and Defence Construction (1951) Limited. The Department of Defence Production places most of the contracts for the Canadian Commercial Corporation.

The net value of contracts placed, as shown in these tables, includes the value of amendments which increased or decreased commitments under existing contracts, as well as the value of new contracts. In some cases, therefore, credit net values have resulted as decreasing amendments to contracts placed in earlier periods have exceeded the value of new contracts and increasing amendments issued.

Some of the figures for the year 1958 have been revised since they were published in the preceding issue of the Annual Report of the Department. Also, the totals at the bottom of the columns do not always equal the sum of the programme values shown because of rounding the figures to the nearest thousand dollars.

Definitions of the Defence Programmes

The general concept involved in this defence programme classification is that of relating all procurement, as far as possible, to a readily identifiable military end-item, such as an aircraft, a ship, a gun, a type of ammunition, etc. Thus a particular programme includes, in addition to the end-item, those components procured for the end-item as well as associated services, such as design and development, installation, maintenance, and repair and overhaul.

Aircraft: This programme includes complete aircraft and items to be physically incorporated in complete aircraft, such as airframes, engines, propellers, electrical systems and their components. Government-furnished aircraft equipment and the repair and overhaul of aircraft are also included in this programme. Guided missiles are included. Excluded are accessories such as armament and communication equipment, navigational and flight instruments, photographic equipment, training devices and ground equipment.

Ships: This programme includes escort vessels, minesweepers, aircraft carriers, and other floating equipment, and ship components such as hulls and superstructures, propulsion machinery, boilers, condensers, heating and electrical systems. Reconversion, refit and repair of ships are also included. Armament and electronic gear are excluded.

Tank-automotive: Included in this programme are tanks and vehicles of both armoured and non-armoured types. Cars, trucks, and buses and their components, such as tires and tubes, are included. Excluded are armament and electronic equipment.

Weapons: The weapons programme includes small arms, guns, howitzers, and rocket launchers and their components. It excludes electronic fire controls.

Ammunition and Explosives: This programme comprises light, medium, and heavy ammunition of all types, including mines, depth charges, rockets, and torpedoes. Explosives and certain defence chemicals are also included in this programme.

Electronics and Communication Equipment: Electronics and communication equipment of all types are in this programme, including telephone, telegraph, radio and radar equipment. Underwater sound equipment and fire control equipment are also included. Development, maintenance, management and transportation services associated with the procurement of electronics and communication equipment are in this programme.

Fuels and Lubricants: This programme includes petroleum, gas, coal and coke, and their products.

Clothing and Equipage: All items of personal clothing, including footwear, and of personal equipment, such as mess kits and steel helmets, are in this programme.

Food and Subsistence: This programme includes foods, beverages, and tobacco products.

Construction: This programme includes all construction contracts for building structures, runways, etc., as well as for consultant services, repairs and maintenance. Most of these contracts are placed by Defence Construction (1951) Limited.

All Contracts and Expenditures

Table 1-a.—Net Value of Total Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	193,950	300,258	202,632
Ships	55,743	77,140	25,989
Tank-automotive	12,277	10,674	7,893
Weapons	18,064 cr	10,570	7,651
Ammunition and explosives	6,497	21,298	11,398
Electronics and communication equipment	123,209	73,409	82,300
Fuels and lubricants	58,231	53,907	57,768
Clothing and equipage	7,614	6,124	18,808
Construction	60,316	66,956	67,141
Other	106,279	110,316	109,976
Total	606,054	730,650	591,556

Table 1-b.—Value of Expenditures on Canadian Government Defence Contracts Placed by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	346,435	341,022	245,893
Ships	83,579	49,937	35,056
Tank-automotive	13,992	11,883	7,574
Weapons	15,628	18,153	12,963
Ammunition and explosives	31,085	24,857	32,930
Electronics and communication equipment	98,676	99,469	99,986
Fuels and lubricants	47,826	46,512	40,444
Clothing and equipage	10,652	7,088	20,639
Construction	105,380	48,516	67,723
Other	116,382	110,289	110,234
Total	869,636	757,727	673,441

Contracts and Expenditures in Canada

Table 2-a.—Net Value of Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	173,841	307,049	170,609
Ships	51,736	75,306	25,337
Tank-automotive	10,984	9,521	7,912
Weapons	20,084 cr	9,173	3,061
Ammunition and explosives	7,809	20,544	9,974
Electronics and communication equipment	103,374	58,296	80,373
Fuels and lubricants	57,837	53,499	57,453
Clothing and equipage	7,567	6,024	19,229
Construction	58,260	66,017	66,298
Other	100,332	105,710	103,814
Total	551,656	711,139	544,059

Table 2-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in Canada by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	324,869	324,645	230,288
Ships	76,587	49,379	34,089
Tank-automotive	11,462	9,554	6,946
Weapons	12,302	12,722	10,381
Ammunition and explosives	27,660	23,934	30,797
Electronics and communication equipment	85,534	73,749	83,264
Fuels and lubricants	47,449	46,139	40,208
Clothing and equipage	10,515	6,999	20,562
Construction	102,432	46,871	66,277
Other	110,215	105,520	105,191
Total	809,026	699,513	628,004

Contracts and Expenditures in the United States

Table 3-a.—Net Value of Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	13,497	8,717 cr	25,873
Tank-automotive	211	180 cr	259 cr
Weapons	1,489 cr	1,648	68 cr
Ammunition and explosives	720	482	1,181
Electronics and communication equipment	18,964	12,864	294
Other	2,847	3,949	3,226
Total	34,750	10,046	30,247

Table 3-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in the United States by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	16,248	12,331	10,212
Tank-automotive	251	61	103
Weapons	1,329	1,644	633
Ammunition and explosives	2,089	560	1,977
Electronics and communication equipment	11,356	24,830	14,734
Other	4,845	2,279	3,613
Total	36,119	41,705	31,272

Contracts and Expenditures in the United Kingdom

Table 4-a.—Net Value of Canadian Government Defence Contracts Placed in the United Kingdom by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	6,612	1,921	6,130
Ships	3,929	147	172
Tank-automotive	927	1,091	130
Weapons	3,478	303 cr	4,611
Ammunition and explosives	2,036 cr	237	217
Electronics and communication equipment	721	2,143	1,514
Other	2,012	857	1,646
Total	15,643	6,093	14,420

Table 4-b.—Value of Expenditures on Canadian Government Defence Contracts Placed in the United Kingdom by the Department of Defence Production and Defence Construction (1951) Limited on behalf of the Department of National Defence

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	5,318	4,041	5,002
Ships	5,705	1,314	187
Tank-automotive	2,131	2,026	416
Weapons	1,385	3,481	1,901
Ammunition and explosives	1,158	329	131
Electronics and communication equipment	1,636	784	1,870
Other	1,531	1,182	1,298
Total	18,864	13,157	10,805

Contracts and Expenditures in Support of Defence Production Activity

Table 5-a.—Net Value of Contracts Placed by the Department of Defence Production for Care, Maintenance and Custody, Establishment of Production Capacity, and Source Establishment for Components, and Value of Approvals for Capital Assistance

Category	1959
	$000
Care, maintenance and custody of Crown-owned standby defence assets	162
Capital assistance approvals	2,416
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	856
Establishment of qualified sources for the production of component parts and materials	356
Total	3,790

Table 5-b.—Value of Expenditures by the Department of Defence Production for Care, Maintenance and Custody, Capital Assistance, Establishment of Production Capacity, and Source Establishment for Components

Category	1959
	$000
Care, maintenance and custody of Crown-owned standby defence assets	216
Capital assistance	695
Establishment of competitive production capacity through absorbing certain preproduction and tooling costs	454
Establishment of qualified sources for the production of component parts and materials	171[1]
Total	1,536

[1] Includes payments made during the first quarter of 1959 with funds transferred from the Department of National Defence.

United States Contracts and Expenditures in Canada

Table 6-a.—Net Value of United States Government Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	42,557	26,990	20,494
Ammunition and explosives	12	757	1,141
Electronics and communication equipment	15,158	12,756	35,804
Construction	1,158	25,631	12,025
Other	2,195	2,045	5,771
Total	61,079	68,180	75,234

Table 6-b.—Value of Expenditures by the United States Government on Defence Contracts Placed in Canada through the Canadian Commercial Corporation and Defence Construction (1951) Limited

Programme	1957	1958	1959
	$000	$000	$000
Aircraft	36,022	37,005	27,476
Ammunition and explosives	2,440	1,742	1,870
Electronics and communication equipment	9,637	13,025	19,491
Construction	5,724	3,256	22,387
Other	2,906	2,738	2,042
Total	56,730	57,766	73,265

Appendix G

Report to the Minister on the Audit of the Accounts of the Department

for the year ended March 31, 1959

OTTAWA, October 14, 1959.

The Honourable Raymond O'Hurley,
Minister of Defence Production,
Ottawa, Canada.

SIR:

An examination having been made of the accounts maintained and the financial statements prepared by the Department of Defence Production for the year ended March 31, 1959, I now report that in my opinion,

(*a*) proper books of account have been kept by the Department;

(*b*) the financial statements of the Department

(i) were prepared on a basis consistent with that of the preceding year and are in agreement with the books of account,

(ii) in the case of the balance sheet, give a true and fair view of the state of the Department's affairs as at the end of the financial year, and

(iii) in the cases of the Summary of Transactions in Equity Account (with supporting statements of Expenditure and Receipts) and the Summary of Transactions in Reserve Arising from Trading Operations, give a true and fair view of the operations of the Department for the financial year; and

(*c*) the transactions of the Department that have come under my notice have been within the powers of the Department under the Defence Production Act and any other Act applicable to the Department.

Yours faithfully,

IAN STEVENSON,
Assistant Auditor General.

Balance Sheet as at March 31, 1959

General Account

Assets			Liabilities and Government Equity	
Cash		$ 24,686	Accounts payable	$ 8,282
Accounts receivable—			Sundry liabilities and deferred revenue	15,993
Sale of Crown plants and equipment	$19,103,473		Equity of Government of Canada, Schedule 1	235,390,060
Renegotiation of contracts, World War II	37,853			
Sundry	15,230			
		19,156,556		
Advances—				
Crown agencies	11,500,000			
Other	4,598			
		11,504,598		
Investments, at cost—				
Polymer Corporation Limited, capital stock	30,000,000			
Township of Toronto, 3% debentures 1959-71	330,566			
Defence Construction (1951) Limited, capital stock	30			
Canadian Arsenals Limited, capital stock	28			
		30,330,624		
Crown-owned lands, buildings, machinery and equipment, at cost—				
With contractors, including rehabilitation and installation costs	48,298,155			
In warehouse	4,038,939			
Advances and progress payments	6,020,598			
		58,357,692		
Crown-owned plants, at cost		12,616,711		
Canadian Arsenals Limited plants, at cost		103,423,468		
		$235,414,335		$235,414,335

REVOLVING FUND

Accounts receivable			$ 3,163,683	Accounts payable		$ 2,242,138
Progress payments to suppliers			3,701,519	Customers' deposits on sales		9,167
Working capital advances			15,027,752	Progress payments from customers		891,849
Inventories—				Equity of Government of Canada—		
Strategic materials, at cost		$14,964,452		Revolving Fund account, as provided by Defence Production Act, section 16 (authorized $100,000,000), net expenditure	$30,160,588	
Cloth, at cost or less—				Inventory taken over by Department at inception	3,728,584	
Balance April 1, 1958	$16,111,415			Reserve arising from trading operations, Schedule 2	378,131	
Purchases	146,702					34,267,303
	16,258,117					
Less: Cost of sales	2,005,809					
	14,252,308					
Deduct: Material transferred to Department of National Defence	13,699,257					
		553,051	15,517,503			
			$37,410,457			$37,410,457

In addition to the assets listed above, the Department has recorded in its books expenditure in the amount of $239,480,632 for production tooling, dies and jigs, title to which is vested in the Crown.

Approved on behalf of the Department.

D. A. GOLDEN,
Deputy Minister.

G. F. WEVILL,
Comptroller.

Certified in accordance with my report dated October 14, 1959, to the Minister of Defence Production.

IAN STEVENSON,
Assistant Auditor General.

Schedule 1

Summary of Transactions in Equity of Government of Canada Account

for the year ended March 31, 1959

Balance brought forward April 1, 1958		$242,866,211	
Additions:			
Funds made available by means of appropriation and by statute	$13,844,741		
Less: expenditure on other than capital account, Schedule 1(a)	13,067,243		
Net equity acquired from appropriations		777,498	
Capitalization of machinery and equipment previously charged as tooling expense, net		547,944	
Accounts receivable arising from sales of tooling during year		235,238	
Transfer of assets from other departments and Crown agencies		17,522	
			$244,444,413
Reductions:			
Receipts from sales, etc., Schedule 1(b)		3,962,733	
Decrease in fixed assets in custody of Canadian Arsenals Ltd. as shown by the balance sheet of the company at March 31, 1959		1,496,109	
Transfer of surplus assets to Crown Assets Disposal Corporation		1,420,815	
Depreciation and other allowances on sales of buildings and equipment		914,321	
Rehabilitation and other expenses on machines no longer on record with the Department		639,623	
Transfer of assets to other departments and Crown agencies		556,163	
Accounts receivable written-off as authorized by parliamentary vote 744		53,669	
Assets written-off due to dismantling, etc.		10,920	
			9,054,353
Balance at March 31, 1959			$235,390,060

Schedule 1 (a)

Statement of Expenditure

for the year ended March 31, 1959

Vote			
78	Departmental administration		
	Salaries	$ 6,211,102	
	Living allowances	85,692	
	Travelling expenses	199,990	
	Office stationery, supplies and equipment	206,948	
	Telephones and telegrams	144,530	
	Professional and special services	105,977	
	Postage	50,942	
	Freight, express and cartage	10,928	
	Purchase and production services by Crown agencies	2,973	
	Publication of departmental reports and other material	2,416	
	Rental of office accommodation	202	
	Sundries	19,445	
			$ 7,041,145
79	Care, maintenance and custody of standby defence plants, buildings, machine tools and production tooling		344,826
80	Capital assistance		
and	Expenditure	825,537	
541	Less: charges to capital account	778,563	
	Assistance to Crown agencies		46,974
81	Grants to municipalities in lieu of taxes		92,011
82	Defence Construction (1951) Limited—Administration		2,823,769
	Canadian Arsenals Limited		
83	Administration and operation		1,799,680
84	Construction and improvements	165,766	
	Equipment	737,992	
			903,758
Statutory			
	Minister of Defence Production—		
	Salary	13,306	
	Motor car allowance	1,774	
			15,080
	Total expenditure, per Schedule 1		$13,067,243

Schedule 1 (b)

Statement of Receipts

for the year ended March 31, 1959

Receipts on Income Account—		
Sales of surplus Crown assets	$ 7,282,095	
Return on investments	5,638,609	
Rentals of buildings and equipment	178,670	
Refund of previous years' expenditure	8,794	
Miscellaneous	65,975	
		$13,174,143
Receipts on Capital Account, per Schedule 1—		
Sale of plant and equipment by the Department	3,793,166	
Repayment of debentures	20,549	
Recoveries of advances and accounts receivable	149,018	
		3,962,733
		$17,136,876

Schedule 2

Summary of Transactions in Reserve Arising from Trading Operations, Revolving Fund

for the year ended March 31, 1959

Balance brought forward April 1, 1958		$ 267,258
Additions:		
Sales, less cost of materials sold—		
Cloth, Sales	$ 2,334,878	
Cloth, Cost of Sales	2,005,809	
		329,069
Strategic materials, Sales	52,851	
Strategic materials, Cost of Sales	52,851	
Shipbuilding components, Sales	6,782,379	
Shipbuilding components, Cost of Sales	6,782,379	
Aircraft components, Sales	461,327	
Aircraft components, Cost of Sales	461,327	
Ordnance, Munitions, etc., Sales	3,667,095	
Ordnance, Munitions, etc., Cost of Sales	3,667,095	
		596,327
Reductions:		
Warehousing and other expenses—cloth		
Salaries and wages	114,747	
Rent	79,745	
Sundries	19,059	
	213,551	
Warehousing expenses—strategic materials	4,399	
Cloth suppliers—discounts, price adjustments, etc.	246	
		218,196
Balance at March 31, 1959		$ 378,131